

CLAIMS

What is claimed is:

1. A method of identifying an agent that reduces a level of a SWAP-70 polypeptide in a mast cell, the method comprising:
 - contacting a eukaryotic cell with a test agent; and
 - determining the effect, if any, of the test agent on the level of SWAP-70 polypeptide in the cell.
2. The method according to claim 1, wherein the agent reduces a level of SWAP-70 mRNA in the cell.
3. The method of claim 1, wherein the level of SWAP-70 polypeptide is determined using an antibody specific for SWAP-70.
4. A method of identifying an agent that reduces an activity of a SWAP-70 polypeptide in a mast cell, the method comprising:
 - contacting a eukaryotic cell with a test agent; and
 - determining the effect, if any, of the test agent on an activity of SWAP-70 in the cell.
5. The method of claim 4, wherein the activity of SWAP-70 is an interaction of SWAP-70 with a SWAP-70 interacting protein.
6. The method of claim 5, wherein the cell is a yeast cell, and wherein said determining is by a yeast two-hybrid method.
7. The method of claim 4, wherein the activity of SWAP-70 is an enzymatic activity.
8. The method of claim 4, wherein the cell is a mast cell, and the effect of the test agent on degranulation is determined.

9. A method of identifying an agent that reduces an activity of a SWAP-70 protein, the method comprising:

contacting a SWAP-70 polypeptide with a test agent; and
determining the effect, if any, of the test agent on an activity of the SWAP-70 polypeptide.

10. The method of claim 9, wherein the activity of SWAP-70 is an interaction of SWAP-70 with a SWAP-70 interacting protein other than SWAP-70.

11. The method of claim 9, wherein the activity of SWAP-70 is multimerization with at least a second SWAP-70 protein.

12. The method of claim 9, wherein the activity of SWAP-70 is an enzymatic activity.

13. A method of identifying an agent that inhibits phosphorylation of a SWAP-70 protein, the method comprising:

contacting a SWAP-70 polypeptide and a kinase that phosphorylates SWAP-70 with a test agent; and
determining the effect, if any, of the test agent on phosphorylation of the SWAP-70 polypeptide.

14. The method of claim 11, wherein said kinase is a SYK kinase.

15. A biologically active agent identified by a method according to any one of claims 1-14.

16. A pharmaceutical composition comprising a biologically active agent that reduces a level or an activity of a SWAP-70 protein; and a pharmaceutically acceptable excipient.

17. An isolated mast cell comprising a non-functional SWAP-70 allele.
18. The mast cell according to claim 17, wherein said mast cell is heterologous for said non-functional SWAP-70 allele.
19. The mast cell according to claim 17, wherein said mast cell is homologous for said non-functional SWAP-70 allele.
20. A method of inhibiting mast cell degranulation, comprising contacting a mast cell with an agent that reduces a level of or an activity of a SWAP-70 protein in the mast cell.
21. A method of treating a disorder associated with mast cell degranulation in an individual, the method comprising administering to the individual an agent that reduces a level or an activity of a SWAP-70 polypeptide in the cell.
22. The method according to claim 21, wherein the disorder is an allergic disorder.

20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100